IN THE CLAIMS

Claims 1 – 22 (Canceled).

Please add new claims 23-46 as follows:

23. (New) A balloon expandable stent for use in a human body, comprising:

a structurally expandable intraluminal element, wherein the intraluminal element includes a superelastic alloy; and

the superelastic alloy having a martensitic phase and an austenitic phase, wherein the superelastic alloy is entirely in the austenitic phase, with no appearance of stress-induced martensite while under applied stress, when the intraluminal element is positioned in the human body.

24. (New) The balloon expandable stent of claim 23, wherein the superelastic alloy has a transformation temperature between the martensitic and ausenitic phases below a human body temperature.

25. (New) The balloon expandable stent of claim 24, wherein the human body temperature is at most 37 degrees C.

26. (New) The balloon expandable stent of claim 24, wherein the transformation temperature includes at least one of an austenite start temperature (A_s) and an austentite finish temperature (A_f) that is -150 to -100 degrees C.

27. (New) The balloon expandable stent of claim 23, wherein the superelastic alloy is binary nickel-titanium.

28. (New) The balloon expandable stent of claim 27, wherein the superelastic alloy contains about 51 to 52 atomic percent nickel.

29. (New) The balloon expandable stent of claim 23, wherein the superelastic alloy is nickel-titanium and further includes a ternary element selected from the group consisting of chromium (Cr), cobalt (Co), vanadium (V), and iron (Fe).

30. (New) The balloon expandable stent of claim 29, wherein the superelastic nickel-titanium alloy includes about 3 atomic percent iron (Fe).

31. (New) The balloon expandable stent of claim 29, wherein the superelastic nickel-titanium alloy includes about 5 atomic percent vanadium (V).

32. (New) A balloon expandable stent for use in a human body, comprising:

an intraluminal element, wherein the element includes a superelastic nickel-titanium alloy; and

the superelastic nickel-titanium alloy having a martensitic phase and an austenitic phase, wherein a martensite deformation temperature (M_d) of the alloy is below 37 degrees C.

33. (New) The balloon expandable stent of claim 32, wherein the superelastic nickel-titanium alloy contains about 51 to 52 atomic percent nickel.

34. (New) The balloon expandable stent of claim 32, wherein the superelastic nickel-titanium alloy further includes a ternary element selected from the group consisting of chromium (Cr), cobalt (Co), vanadium (V), and iron (Fe).

35. (New) The balloon expandable stent of claim 34, wherein the superelastic nickel-titanium alloy includes about 3 atomic percent iron (Fe).

36. (New) The balloon expandable stent of claim 34, wherein the superelastic nickel-titanium alloy includes about 5 atomic percent vanadium (V).

37. (New) The balloon expandable stent of claim 32, wherein the superelastic nickel-titanium alloy is defined by at least one of an austenite start temperature (A_s) and an austenite finish temperature (A_f) that is 25 to 150 degrees below the martensite deformation temperature (M_d).

38. (New) The balloon expandable stent of claim 32, wherein at least one of an austenite start temperature (A_s) and an austentite finish temperature (A_f) is -150 to -100 degrees C.

39. (New) The balloon expandable stent of claim 32, wherein the superelastic alloy includes hot working to set the martensite deformation temperature (M_d) of the alloy below 37 degrees C.

40. (New) The balloon expandable stent of claim 32, wherein the superelastic alloy has no stress-induced martentsite while the intraluminal element is positioned in the human body.

41. (New) The balloon expandable stent of claim 32, wherein the superelastic alloy exhibits no superelastic behavior within the human body.

42. (New) A method of providing a balloon expandable stent for use in a lumen of a human body, comprising:

providing an intraluminal element having a binary superelastic alloy including nickel-titanium, wherein the superelastic alloy includes a martensitic phase and an austenitic phase; and

adding a ternary element to the superelastic alloy to depress a martensite deformation temperature (M_d) of the superelastic alloy to below human body temperature.

43. (New) The method of providing a balloon expandable stent of claim 42, wherein the ternary element is selected from the group consisting of chromium (Cr), cobalt (Co), vanadium (V), and iron (Fe).

44. (New) The method of providing a balloon expandable stent of claim 43, wherein about 3 atomic percent iron (Fe) is added to the superelastic alloy.

45. (New) The method of providing a balloon expandable stent of claim 43, wherein about 5 atomic percent vanadium (V) is added to the superelastic alloy.

46. (New) The method of providing a balloon expandable stent of claim 42, wherein the superelastic alloy does not include stress-induced matensite.